

# Pharmacy Management System - Complete API Testing Guide

Base URL: <http://localhost:8080> Swagger UI: <http://localhost:8080/swagger-ui.html>

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## 1. Getting Started

### Prerequisites

- Application running on <http://localhost:8080>
- PostgreSQL database `medlan_pharmacy` created
- Postman or any REST client installed

### Postman Setup

#### 1. Create Environment Variables:

```
Variable: base_url      Value: http://localhost:8080
Variable: token          Value: (will be set after login)
Variable: branchId       Value: (will be set after creating branch)
Variable: productId       Value: (will be set after creating product)
Variable: supplierId     Value: (will be set after creating supplier)
Variable: customerId      Value: (will be set after creating customer)
```

#### 2. Authorization Header (for protected endpoints):

Key: Authorization  
Value: Bearer {{token}}

---

## 2. Authentication APIs

### 2.1 Register Initial Admin User (FIRST STEP - No Auth Required)

**DO THIS FIRST** - Creates the first admin user in empty database

POST {{base\_url}}/api/auth/register/initial  
Content-Type: application/json

**Request Body:**

```
{  
    "username": "admin",  
    "password": "admin123",  
    "fullName": "System Administrator",  
    "email": "admin@medlan.com",  
    "phoneNumber": "1234567890",  
    "role": "ADMIN"  
}
```

**Expected Response (200 OK):**

```
{  
    "success": true,  
    "message": "Initial user registered successfully",  
    "data": {  
        "id": 1,  
        "username": "admin",  
        "fullName": "System Administrator",  
        "email": "admin@medlan.com",  
        "role": "ADMIN",  
        "active": true  
    }  
}
```

---

### 2.2 Login

POST {{base\_url}}/api/auth/login  
Content-Type: application/json

**Request Body:**

```
{  
    "username": "admin",  
    "password": "admin123",  
    "rememberMe": false
```

```
        "password": "admin123"
    }
```

**Expected Response (200 OK):**

```
{
    "success": true,
    "message": "Login successful",
    "data": {
        "accessToken": "eyJhbGciOiJIUzUxMiJ9...",
        "refreshToken": "eyJhbGciOiJIUzUxMiJ9...",
        "tokenType": "Bearer",
        "expiresIn": 86400000,
        "user": {
            "id": 1,
            "username": "admin",
            "fullName": "System Administrator",
            "role": "ADMIN"
        }
    }
}
```

Save the accessToken to your Postman environment variable token

---

### 2.3 Get Current User

```
GET {{base_url}}/api/auth/me
Authorization: Bearer {{token}}
```

---

### 2.4 Refresh Token

```
POST {{base_url}}/api/auth/refresh?refreshToken={{refresh_token}}
```

---

### 2.5 Change Password

```
POST {{base_url}}/api/auth/change-password
Authorization: Bearer {{token}}
Content-Type: application/json
```

**Request Body:**

```
{
    "currentPassword": "admin123",
    "newPassword": "newAdmin123",
```

```
    "confirmPassword": "newAdmin123"  
}
```

---

## 2.6 Logout

```
POST {{base_url}}/api/auth/logout  
Authorization: Bearer {{token}}
```

---

# 3. Branch Management APIs

## 3.1 Create Branch

```
POST {{base_url}}/api/branches  
Authorization: Bearer {{token}}  
Content-Type: application/json
```

Request Body:

```
{  
    "branchCode": "BR001",  
    "branchName": "Main Branch - Colombo",  
    "address": "123 Main Street, Colombo 03",  
    "city": "Colombo",  
    "state": "Western Province",  
    "pincode": "00300",  
    "phoneNumber": "0112345678",  
    "email": "mainbranch@medlan.com",  
    "gstInNumber": "GST123456789",  
    "drugLicenseNumber": "DL-2024-001",  
    "isMainBranch": true  
}
```

Save the returned `id` to Postman environment variable `branchId`

---

## 3.2 Get All Branches (Paginated)

```
GET {{base_url}}/api/branches?page=0&size=20  
Authorization: Bearer {{token}}
```

---

## 3.3 Get All Branches (List)

```
GET {{base_url}}/api/branches/all  
Authorization: Bearer {{token}}
```

---

### 3.4 Get Active Branches

```
GET {{base_url}}/api/branches/active
Authorization: Bearer {{token}}
```

---

### 3.5 Get Branch by ID

```
GET {{base_url}}/api/branches/{{branchId}}
Authorization: Bearer {{token}}
```

---

### 3.6 Get Branch by Code

```
GET {{base_url}}/api/branches/code/BR001
Authorization: Bearer {{token}}
```

---

### 3.7 Update Branch

```
PUT {{base_url}}/api/branches/{{branchId}}
Authorization: Bearer {{token}}
Content-Type: application/json
```

#### Request Body:

```
{
  "branchCode": "BR001",
  "branchName": "Main Branch - Colombo (Updated)",
  "address": "123 Main Street, Colombo 03",
  "city": "Colombo",
  "state": "Western Province",
  "pincode": "00300",
  "phoneNumber": "0112345679",
  "email": "mainbranch@medlan.com",
  "isMainBranch": true
}
```

---

### 3.8 Activate/Deactivate Branch

```
POST {{base_url}}/api/branches/{{branchId}}/activate
Authorization: Bearer {{token}}
```

```
POST {{base_url}}/api/branches/{{branchId}}/deactivate
Authorization: Bearer {{token}}
```

---

### 3.9 Delete Branch

```
DELETE {{base_url}}/api/branches/{{branchId}}
Authorization: Bearer {{token}}
```

---

## 4. User Management APIs

### 4.1 Create User

```
POST {{base_url}}/api/users
Authorization: Bearer {{token}}
Content-Type: application/json
```

Request Body:

```
{
  "username": "pharmacist1",
  "password": "pharma123",
  "fullName": "John Pharmacist",
  "email": "john@medlan.com",
  "phoneNumber": "0771234567",
  "role": "PHARMACIST",
  "employeeCode": "EMP001",
  "discountLimit": 10.00,
  "creditTransactionLimit": 5000.00
}
```

**Available Roles:** - SUPER\_ADMIN - Full system access - ADMIN - Branch-level admin access - BRANCH\_MANAGER - Manage branch operations - PHARMACIST - Dispense medicines and sales - CASHIER - Sales and billing - INVENTORY\_MANAGER - Manage stock and inventory - ACCOUNTANT - Financial operations

---

### 4.2 Get All Users (Paginated)

```
GET {{base_url}}/api/users?page=0&size=20&sortBy=username&sortDir=asc
Authorization: Bearer {{token}}
```

---

#### **4.3 Get User by ID**

```
GET {{base_url}}/api/users/1  
Authorization: Bearer {{token}}
```

---

#### **4.4 Get User by Username**

```
GET {{base_url}}/api/users/username/admin  
Authorization: Bearer {{token}}
```

---

#### **4.5 Get Users by Role**

```
GET {{base_url}}/api/users/role/PHARMACIST  
Authorization: Bearer {{token}}
```

---

#### **4.6 Get Active Users**

```
GET {{base_url}}/api/users/active  
Authorization: Bearer {{token}}
```

---

#### **4.7 Get Users by Branch**

```
GET {{base_url}}/api/users/branch/{{branchId}}  
Authorization: Bearer {{token}}
```

---

#### **4.8 Update User**

```
PUT {{base_url}}/api/users/1  
Authorization: Bearer {{token}}  
Content-Type: application/json
```

**Request Body:**

```
{  
    "fullName": "John Pharmacist Updated",  
    "email": "john.updated@medlan.com",  
    "phoneNumber": "0771234568",  
    "role": "PHARMACIST"  
}
```

---

#### **4.9 Activate/Deactivate User**

```
PATCH {{base_url}}/api/users/1/activate  
Authorization: Bearer {{token}}  
  
PATCH {{base_url}}/api/users/1/deactivate  
Authorization: Bearer {{token}}
```

---

#### **4.10 Reset User Password**

```
PATCH {{base_url}}/api/users/1/reset-password?newPassword=newPassword123  
Authorization: Bearer {{token}}
```

---

#### **4.11 Delete User**

```
DELETE {{base_url}}/api/users/1  
Authorization: Bearer {{token}}
```

---

### **5. Category Management APIs**

#### **5.1 Create Category**

```
POST {{base_url}}/api/categories?categoryName=Antibiotics&categoryCode=CAT001&description=A  
uthorization: Bearer {{token}}
```

---

#### **5.2 Get All Categories**

```
GET {{base_url}}/api/categories  
Authorization: Bearer {{token}}
```

---

#### **5.3 Get Active Categories**

```
GET {{base_url}}/api/categories/active  
Authorization: Bearer {{token}}
```

---

#### **5.4 Get Category by ID**

```
GET {{base_url}}/api/categories/1  
Authorization: Bearer {{token}}
```

---

## 5.5 Update Category

```
PUT {{base_url}}/api/categories/1?categoryName=Antibiotics Updated&description=Updated description
Authorization: Bearer {{token}}
```

---

## 5.6 Delete Category

```
DELETE {{base_url}}/api/categories/1
Authorization: Bearer {{token}}
```

---

# 6. Product Management APIs

## 6.1 Create Product

```
POST {{base_url}}/api/products
Authorization: Bearer {{token}}
Content-Type: application/json
```

**Request Body:**

```
{
  "productName": "Paracetamol 500mg",
  "genericName": "Acetaminophen",
  "categoryId": 1,
  "dosageForm": "TABLET",
  "strength": "500mg",
  "drugSchedule": "OTC",
  "manufacturer": "ABC Pharmaceuticals",
  "barcode": "8901234567890",
  "description": "Pain reliever and fever reducer",
  "costPrice": 2.50,
  "sellingPrice": 5.00,
  "mrp": 6.00,
  "profitMargin": 50.00,
  "gstRate": 5.00,
  "reorderLevel": 100,
  "minimumStock": 50,
  "maximumStock": 1000,
  "isPrescriptionRequired": false,
  "isNarcotic": false,
  "isRefrigerated": false
}
```

**Available Dosage Forms:** - TABLET, CAPSULE, SYRUP, INJECTION, DROPS, CREAM, OINTMENT, GEL, POWDER, INHALER, SUPPOSITORY, SUSPENSION, SOLUTION, LOTION, SPRAY, PATCH, OTHER

**Available Drug Schedules:** - OTC - Over the counter - H - Schedule H (Prescription required) - H1 - Schedule H1 (Special prescription) - X - Schedule X (Narcotic/Dangerous drugs) - G - Schedule G (General)

Save the returned id to Postman environment variable productId

---

## 6.2 Get All Products (Paginated)

```
GET {{base_url}}/api/products?page=0&size=20&sortBy=productName&sortDir=asc  
Authorization: Bearer {{token}}
```

---

## 6.3 Get Product by ID

```
GET {{base_url}}/api/products/{{productId}}  
Authorization: Bearer {{token}}
```

---

## 6.4 Get Product by Code

```
GET {{base_url}}/api/products/code/PRD001  
Authorization: Bearer {{token}}
```

---

## 6.5 Search Products

```
GET {{base_url}}/api/products/search?query=paracetamol  
Authorization: Bearer {{token}}
```

---

## 6.6 Get Low Stock Products

```
GET {{base_url}}/api/products/low-stock?branchId={{branchId}}  
Authorization: Bearer {{token}}
```

---

## 6.7 Update Product

```
PUT {{base_url}}/api/products/{{productId}}  
Authorization: Bearer {{token}}  
Content-Type: application/json
```

#### **Request Body:**

```
{  
    "productName": "Paracetamol 500mg (Updated)",  
    "sellingPrice": 5.50,  
    "mrp": 6.50  
}
```

---

#### **6.8 Discontinue Product**

```
PATCH {{base_url}}/api/products/{{productId}}/discontinue  
Authorization: Bearer {{token}}
```

---

#### **6.9 Delete Product**

```
DELETE {{base_url}}/api/products/{{productId}}  
Authorization: Bearer {{token}}
```

---

### **7. Supplier Management APIs**

#### **7.1 Create Supplier**

```
POST {{base_url}}/api/suppliers  
Authorization: Bearer {{token}}  
Content-Type: application/json
```

#### **Request Body:**

```
{  
    "supplierName": "ABC Pharmaceuticals Ltd",  
    "contactPerson": "Mr. Kumar",  
    "phoneNumber": "0112345678",  
    "email": "sales@abcpharma.com",  
    "address": "456 Industrial Zone, Colombo 15",  
    "city": "Colombo",  
    "state": "Western Province",  
    "pincode": "01500",  
    "gstinNumber": "GST987654321",  
    "panNumber": "PAN123456",  
    "drugLicenseNumber": "DL-SUP-001",  
    "defaultDiscountPercent": 5.00,  
    "paymentTermDays": 30,  
    "creditLimit": 100000.00  
}
```

Save the returned id to Postman environment variable `supplierId`

---

### 7.2 Get All Suppliers (Paginated)

```
GET {{base_url}}/api/suppliers?page=0&size=20&sortBy=supplierName&sortDir=asc  
Authorization: Bearer {{token}}
```

---

### 7.3 Get Supplier by ID

```
GET {{base_url}}/api/suppliers/{{supplierId}}  
Authorization: Bearer {{token}}
```

---

### 7.4 Get Supplier by Code

```
GET {{base_url}}/api/suppliers/code/SUP001  
Authorization: Bearer {{token}}
```

---

### 7.5 Search Suppliers

```
GET {{base_url}}/api/suppliers/search?query=ABC  
Authorization: Bearer {{token}}
```

---

### 7.6 Get Active Suppliers

```
GET {{base_url}}/api/suppliers/active  
Authorization: Bearer {{token}}
```

---

### 7.7 Update Supplier

```
PUT {{base_url}}/api/suppliers/{{supplierId}}  
Authorization: Bearer {{token}}  
Content-Type: application/json
```

---

### 7.8 Activate/Deactivate Supplier

```
PATCH {{base_url}}/api/suppliers/{{supplierId}}/activate  
Authorization: Bearer {{token}}
```

```
PATCH {{base_url}}/api/suppliers/{{supplierId}}/deactivate
Authorization: Bearer {{token}}
```

---

### 7.9 Delete Supplier

```
DELETE {{base_url}}/api/suppliers/{{supplierId}}
Authorization: Bearer {{token}}
```

---

## 8. Customer Management APIs

### 8.1 Create Customer

```
POST {{base_url}}/api/customers
Authorization: Bearer {{token}}
Content-Type: application/json
```

Request Body:

```
{
  "customerName": "John Doe",
  "phoneNumber": "0771234567",
  "email": "john.doe@email.com",
  "gender": "Male",
  "dateOfBirth": "1985-05-15",
  "address": "789 Customer Street",
  "city": "Colombo",
  "state": "Western Province",
  "pincode": "00500",
  "creditLimit": 10000.00,
  "medicalHistory": "Diabetes Type 2",
  "allergies": "Penicillin",
  "insuranceProvider": "ABC Insurance",
  "insurancePolicyNumber": "INS-123456"
}
```

Save the returned id to Postman environment variable customerId

---

### 8.2 Get All Customers (Paginated)

```
GET {{base_url}}/api/customers?page=0&size=20&sortBy=customerName&sortDir=asc
Authorization: Bearer {{token}}
```

---

### **8.3 Get Customer by ID**

```
GET {{base_url}}/api/customers/{{customerId}}
Authorization: Bearer {{token}}
```

---

### **8.4 Get Customer by Code**

```
GET {{base_url}}/api/customers/code/CUST001
Authorization: Bearer {{token}}
```

---

### **8.5 Search Customers**

```
GET {{base_url}}/api/customers/search?query=John
Authorization: Bearer {{token}}
```

---

### **8.6 Get Active Customers**

```
GET {{base_url}}/api/customers/active
Authorization: Bearer {{token}}
```

---

### **8.7 Update Customer**

```
PUT {{base_url}}/api/customers/{{customerId}}
Authorization: Bearer {{token}}
Content-Type: application/json
```

---

### **8.8 Activate/Deactivate Customer**

```
PATCH {{base_url}}/api/customers/{{customerId}}/activate
Authorization: Bearer {{token}}
```

---

### **8.9 Delete Customer**

```
DELETE {{base_url}}/api/customers/{{customerId}}
Authorization: Bearer {{token}}
```

---

## 9. Purchase Order APIs

### 9.1 Create Purchase Order

```
POST {{base_url}}/api/purchase-orders
Authorization: Bearer {{token}}
Content-Type: application/json
```

Request Body:

```
{
  "supplierId": 1,
  "branchId": 1,
  "expectedDeliveryDate": "2024-12-25",
  "discountAmount": 50.00,
  "remarks": "Urgent order for stock replenishment",
  "supplierReference": "SUP-REF-001",
  "items": [
    {
      "productId": 1,
      "quantityOrdered": 100,
      "unitPrice": 2.50,
      "discountPercent": 5.00,
      "gstRate": 5.00,
      "remarks": "Standard batch"
    },
    {
      "productId": 2,
      "quantityOrdered": 50,
      "unitPrice": 10.00,
      "discountPercent": 0,
      "gstRate": 12.00
    }
  ]
}
```

---

### 9.2 Get All Purchase Orders (Paginated)

```
GET {{base_url}}/api/purchase-orders?page=0&size=20&sortBy=createdAt&sortDir=desc
Authorization: Bearer {{token}}
```

---

### 9.3 Get Purchase Order by ID

```
GET {{base_url}}/api/purchase-orders/1
Authorization: Bearer {{token}}
```

---

#### 9.4 Get Purchase Order by PO Number

```
GET {{base_url}}/api/purchase-orders/number/PO-2024-001  
Authorization: Bearer {{token}}
```

---

#### 9.5 Get Purchase Orders by Supplier

```
GET {{base_url}}/api/purchase-orders/supplier/{{supplierId}}  
Authorization: Bearer {{token}}
```

---

#### 9.6 Get Purchase Orders by Branch

```
GET {{base_url}}/api/purchase-orders/branch/{{branchId}}  
Authorization: Bearer {{token}}
```

---

#### 9.7 Get Purchase Orders by Status

```
GET {{base_url}}/api/purchase-orders/status/DRAFT  
Authorization: Bearer {{token}}
```

**Available Status:** - DRAFT, PENDING\_APPROVAL, APPROVED, REJECTED,  
SENT\_TO\_SUPPLIER, PARTIALLY\_RECEIVED, FULLY\_RECEIVED, CANCELLED

---

#### 9.8 Get Purchase Orders by Date Range

```
GET {{base_url}}/api/purchase-orders/date-range?startDate=2024-01-01&endDate=2024-12-31  
Authorization: Bearer {{token}}
```

---

#### 9.9 Approve Purchase Order

```
POST {{base_url}}/api/purchase-orders/1/approve  
Authorization: Bearer {{token}}
```

---

#### 9.10 Reject Purchase Order

```
POST {{base_url}}/api/purchase-orders/1/reject?reason=Budget constraints  
Authorization: Bearer {{token}}
```

---

## 9.11 Update Purchase Order Status

```
PUT {{base_url}}/api/purchase-orders/1/status?status=SENT_TO_SUPPLIER
Authorization: Bearer {{token}}
```

---

## 9.12 Delete Purchase Order

```
DELETE {{base_url}}/api/purchase-orders/1
Authorization: Bearer {{token}}
```

---

# 10. GRN (Goods Receipt Note) APIs

## 10.1 Create GRN (Receive Stock)

```
POST {{base_url}}/api/grn
Authorization: Bearer {{token}}
Content-Type: application/json
```

Request Body:

```
{
  "supplierId": 1,
  "branchId": 1,
  "purchaseOrderId": 1,
  "receivedDate": "2024-12-19",
  "supplierInvoiceNumber": "INV-SUP-001",
  "supplierInvoiceDate": "2024-12-18",
  "remarks": "First batch received",
  "items": [
    {
      "productId": 1,
      "batchNumber": "BATCH-2024-001",
      "quantity": 100,
      "costPrice": 2.50,
      "sellingPrice": 5.00,
      "manufacturingDate": "2024-06-01",
      "expiryDate": "2026-06-01",
      "discountAmount": 0
    },
    {
      "productId": 2,
      "batchNumber": "BATCH-2024-002",
      "quantity": 50,
      "costPrice": 3.00,
      "sellingPrice": 6.00,
      "manufacturingDate": "2024-06-02",
      "expiryDate": "2026-06-02",
      "discountAmount": 0
    }
  ]
}
```

```
        "costPrice": 10.00,
        "sellingPrice": 18.00,
        "manufacturingDate": "2024-01-01",
        "expiryDate": "2025-12-31"
    }
]
}
```

This is the API that adds stock to inventory!

---

#### 10.2 Get All GRNs (Paginated)

```
GET {{base_url}}/api/grn?page=0&size=20
Authorization: Bearer {{token}}
```

---

#### 10.3 Get GRN by ID

```
GET {{base_url}}/api/grn/1
Authorization: Bearer {{token}}
```

---

#### 10.4 Get GRN by Number

```
GET {{base_url}}/api/grn/number/GRN-2024-001
Authorization: Bearer {{token}}
```

---

#### 10.5 Get GRNs by Branch

```
GET {{base_url}}/api/grn/branch/{{branchId}}?page=0&size=20
Authorization: Bearer {{token}}
```

---

#### 10.6 Get GRNs by Supplier

```
GET {{base_url}}/api/grn/supplier/{{supplierId}}?page=0&size=20
Authorization: Bearer {{token}}
```

---

#### 10.7 Get GRNs by Date Range

```
GET {{base_url}}/api/grn/date-range?startDate=2024-01-01&endDate=2024-12-31
Authorization: Bearer {{token}}
```

---

---

#### **10.8 Get GRNs by Status**

```
GET {{base_url}}/api/grn/status/PENDING?page=0&size=20  
Authorization: Bearer {{token}}
```

**Available Status:** - PENDING, APPROVED, REJECTED, CANCELLED

---

#### **10.9 Approve GRN**

```
POST {{base_url}}/api/grn/1/approve  
Authorization: Bearer {{token}}
```

---

#### **10.10 Reject GRN**

```
POST {{base_url}}/api/grn/1/reject?reason=Quality issues found  
Authorization: Bearer {{token}}
```

---

#### **10.11 Cancel GRN**

```
POST {{base_url}}/api/grn/1/cancel?reason=Duplicate entry  
Authorization: Bearer {{token}}
```

---

### **11. Inventory Management APIs**

#### **11.1 Get Inventory by Product and Branch**

```
GET {{base_url}}/api/inventory/product/{{productId}}/branch/{{branchId}}  
Authorization: Bearer {{token}}
```

---

#### **11.2 Get All Inventory by Branch (Paginated)**

```
GET {{base_url}}/api/inventory/branch/{{branchId}}?page=0&size=20  
Authorization: Bearer {{token}}
```

---

### **11.3 Get Low Stock Inventory**

```
GET {{base_url}}/api/inventory/branch/{{branchId}}/low-stock  
Authorization: Bearer {{token}}
```

---

### **11.4 Get Out of Stock Inventory**

```
GET {{base_url}}/api/inventory/branch/{{branchId}}/out-of-stock  
Authorization: Bearer {{token}}
```

---

### **11.5 Get Batches by Product and Branch**

```
GET {{base_url}}/api/inventory/batches/product/{{productId}}/branch/{{branchId}}  
Authorization: Bearer {{token}}
```

---

### **11.6 Get Expiring Batches**

```
GET {{base_url}}/api/inventory/branch/{{branchId}}/expiring?alertDate=2025-01-31  
Authorization: Bearer {{token}}
```

---

### **11.7 Get Expired Batches**

```
GET {{base_url}}/api/inventory/branch/{{branchId}}/expired  
Authorization: Bearer {{token}}
```

---

### **11.8 Get Available Quantity for Product**

```
GET {{base_url}}/api/inventory/available-quantity/product/{{productId}}/branch/{{branchId}}  
Authorization: Bearer {{token}}
```

---

## **12. Stock Transfer APIs**

### **12.1 Create Stock Transfer**

```
POST {{base_url}}/api/stock-transfers  
Authorization: Bearer {{token}}  
Content-Type: application/json
```

**Request Body:**

```
{  
    "fromBranchId": 1,  
    "toBranchId": 2,  
    "expectedReceiptDate": "2024-12-20",  
    "remarks": "Urgent stock requirement at branch 2",  
    "items": [  
        {  
            "productId": 1,  
            "inventoryBatchId": 1,  
            "quantityTransferred": 50,  
            "remarks": "Transfer from main stock"  
        }  
    ]  
}
```

---

## 12.2 Get All Stock Transfers (Paginated)

```
GET {{base_url}}/api/stock-transfers?page=0&size=20&sortBy=createdAt&sortDir=desc  
Authorization: Bearer {{token}}
```

---

## 12.3 Get Stock Transfer by ID

```
GET {{base_url}}/api/stock-transfers/1  
Authorization: Bearer {{token}}
```

---

## 12.4 Get Stock Transfer by Number

```
GET {{base_url}}/api/stock-transfers/number/ST-2024-001  
Authorization: Bearer {{token}}
```

---

## 12.5 Get Transfers from Branch

```
GET {{base_url}}/api/stock-transfers/from-branch/{{branchId}}  
Authorization: Bearer {{token}}
```

---

## 12.6 Get Transfers to Branch

```
GET {{base_url}}/api/stock-transfers/to-branch/{{branchId}}  
Authorization: Bearer {{token}}
```

---

## 12.7 Get Transfers by Status

```
GET {{base_url}}/api/stock-transfers/status/PENDING  
Authorization: Bearer {{token}}
```

Available Status: - PENDING, IN\_TRANSIT, RECEIVED, PARTIALLY\_RECEIVED, CANCELLED

---

## 12.8 Get Transfers by Date Range

```
GET {{base_url}}/api/stock-transfers/date-range?startDate=2024-01-01&endDate=2024-12-31  
Authorization: Bearer {{token}}
```

---

# 13. Sales (POS) APIs

## 13.1 Create Sale (Make a Sale)

```
POST {{base_url}}/api/sales  
Authorization: Bearer {{token}}  
Content-Type: application/json
```

Request Body:

```
{  
    "customerId": 1,  
    "branchId": 1,  
    "items": [  
        {  
            "productId": 1,  
            "inventoryBatchId": 1,  
            "quantity": 2,  
            "discountAmount": 0  
        },  
        {  
            "productId": 2,  
            "quantity": 1,  
            "discountAmount": 0  
        }  
    ],  
    "discountAmount": 5.00,  
    "paymentMethod": "CASH",  
    "paidAmount": 50.00,  
    "patientName": "John Doe",  
}
```

```
        "doctorName": "Dr. Smith",
        "remarks": "Prescription sale"
    }
```

**Available Payment Methods:** - CASH - Cash - CARD - Debit/Credit Card  
- UPI - UPI Payment - CHEQUE - Cheque - BANK\_TRANSFER - Bank Transfer -  
CREDIT - Credit Sale

---

### 13.2 Get All Sales (Paginated)

```
GET {{base_url}}/api/sales?page=0&size=20
Authorization: Bearer {{token}}
```

---

### 13.3 Get Sale by ID

```
GET {{base_url}}/api/sales/1
Authorization: Bearer {{token}}
```

---

### 13.4 Get Sale by Sale Number

```
GET {{base_url}}/api/sales/number/SALE-2024-001
Authorization: Bearer {{token}}
```

---

### 13.5 Get Sales by Branch

```
GET {{base_url}}/api/sales/branch/{{branchId}}?page=0&size=20
Authorization: Bearer {{token}}
```

---

### 13.6 Get Sales by Customer

```
GET {{base_url}}/api/sales/customer/{{customerId}}?page=0&size=20
Authorization: Bearer {{token}}
```

---

### 13.7 Get Sales by Date Range

```
GET {{base_url}}/api/sales/date-range?startDate=2024-12-01T00:00:00&endDate=2024-12-31T23:59:59
Authorization: Bearer {{token}}
```

---

### 13.8 Get Sales by Branch and Date Range

```
GET {{base_url}}/api/sales/branch/{{branchId}}/date-range?startDate=2024-12-01T00:00:00&endDate=2024-12-01T23:59:59  
Authorization: Bearer {{token}}
```

---

### 13.9 Get Sales by Status

```
GET {{base_url}}/api/sales/status/COMPLETED?page=0&size=20  
Authorization: Bearer {{token}}
```

**Available Status:** - PENDING, COMPLETED, CANCELLED, VOIDED, PARTIALLY\_RETURNED, FULLY\_RETURNED

---

### 13.10 Get Total Sales Amount

```
GET {{base_url}}/api/sales/branch/{{branchId}}/total?startDate=2024-12-01T00:00:00&endDate=2024-12-01T23:59:59  
Authorization: Bearer {{token}}
```

---

### 13.11 Get Sales Count

```
GET {{base_url}}/api/sales/branch/{{branchId}}/count?startDate=2024-12-01T00:00:00&endDate=2024-12-01T23:59:59  
Authorization: Bearer {{token}}
```

---

### 13.12 Cancel Sale

```
POST {{base_url}}/api/sales/1/cancel?reason=Customer requested cancellation  
Authorization: Bearer {{token}}
```

---

### 13.13 Void Sale (Admin Only)

```
POST {{base_url}}/api/sales/1/void?reason=Billing error  
Authorization: Bearer {{token}}
```

---

## 14. Reports & Dashboard APIs

### 14.1 Get Dashboard Summary

```
GET {{base_url}}/api/dashboard/summary?branchId={{branchId}}  
Authorization: Bearer {{token}}
```

---

## 14.2 Sales Reports

### Get Total Sales

```
GET {{base_url}}/api/reports/sales/total?branchId={{branchId}}&startDate=2024-12-01&endDate=2024-12-31
Authorization: Bearer {{token}}
```

### Get Sales Count

```
GET {{base_url}}/api/reports/sales/count?branchId={{branchId}}&startDate=2024-12-01&endDate=2024-12-31
Authorization: Bearer {{token}}
```

### Get Sales Details

```
GET {{base_url}}/api/reports/sales/details?branchId={{branchId}}&startDate=2024-12-01&endDate=2024-12-31
Authorization: Bearer {{token}}
```

### Get Daily Sales Summary

```
GET {{base_url}}/api/reports/sales/daily?branchId={{branchId}}&startDate=2024-12-01&endDate=2024-12-31
Authorization: Bearer {{token}}
```

### Get Top Selling Products

```
GET {{base_url}}/api/reports/sales/top-products?branchId={{branchId}}&startDate=2024-12-01&endDate=2024-12-31
Authorization: Bearer {{token}}
```

---

## 15. Complete Testing Workflow

Follow this order to test all APIs systematically:

### Phase 1: Initial Setup (Required)

1. Register Initial Admin - POST /api/auth/register/initial
2. Login - POST /api/auth/login (Save token!)
3. Create Branch - POST /api/branches (Save branchId!)

### Phase 2: Master Data Setup

4. Create Categories - POST /api/categories
5. Create Products - POST /api/products (Save productId!)
6. Create Suppliers - POST /api/suppliers (Save supplierId!)
7. Create Customers - POST /api/customers (Save customerId!)
8. Create Additional Users - POST /api/users

### Phase 3: Procurement Workflow

9. Create Purchase Order - POST /api/purchase-orders
10. Approve Purchase Order - POST /api/purchase-orders/{id}/approve
11. Create GRN (Receive Stock) - POST /api/grn
12. Approve GRN - POST /api/grn/{id}/approve
13. Check Inventory - GET /api/inventory/branch/{branchId}

### Phase 4: Sales Workflow

14. Create Sale - POST /api/sales
15. View Sale Details - GET /api/sales/{id}
16. Check Updated Inventory - GET /api/inventory/branch/{branchId}

### Phase 5: Reports & Dashboard

17. View Dashboard - GET /api/dashboard/summary
18. View Sales Reports - GET /api/reports/sales/\*

### Phase 6: Advanced Operations

19. Create Second Branch - POST /api/branches
  20. Stock Transfer - POST /api/stock-transfers
  21. Cancel/Void Sales - POST /api/sales/{id}/cancel
- 

## Response Format

All APIs return responses in this format:

### Success Response:

```
{  
  "success": true,  
  "message": "Operation successful",  
  "data": { ... },  
  "timestamp": "2024-12-19T10:30:00"  
}
```

### Error Response:

```
{  
  "success": false,  
  "message": "Error description",  
  "errors": ["Field validation error 1", "Field validation error 2"],  
  "timestamp": "2024-12-19T10:30:00"  
}
```

### Paginated Response:

```
{  
    "success": true,  
    "data": {  
        "content": [...],  
        "page": 0,  
        "size": 20,  
        "totalElements": 100,  
        "totalPages": 5,  
        "first": true,  
        "last": false  
    }  
}
```

---

## Authentication Notes

1. All endpoints except /api/auth/login and /api/auth/register/initial require authentication
  2. Token expires after 24 hours (86400000 ms)
  3. Use refresh token to get new access token
  4. Include token in header: Authorization: Bearer <token>
- 

## Quick Test Commands (cURL)

### Login

```
curl -X POST http://localhost:8080/api/auth/login \  
-H "Content-Type: application/json" \  
-d '{"username":"admin","password":"admin123"}'
```

### Get Branches (with token)

```
curl -X GET http://localhost:8080/api/branches/all \  
-H "Authorization: Bearer YOUR_TOKEN_HERE"
```

---

## Additional Resources

- **Swagger UI:** <http://localhost:8080/swagger-ui.html>
  - **OpenAPI Spec:** <http://localhost:8080/v3/api-docs>
  - **Actuator Health:** <http://localhost:8080/actuator/health>
- 

Happy Testing!